**Supplementary 4**

**Recombined enzyme activity**

**Bgl**

Table S4-1 p-NP standard curve

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| p-NP(mM) | 0.025  | 0.050  | 0.075  | 0.100  | 0.125  | 0.150  | 0.175  | 0.200  | 0.225  |
| OD410 | 0.190  | 0.336  | 0.463  | 0.604  | 0.731  | 0.878  | 1.003  | 1.117  | 1.259  |

**Y=5.3153X+0.0668 R2=0.999**

**Measured method:**

5μL crude enzyme + 20μL 25mM p-NPG + 115μL PBS →50℃, 10min→70μL 0.4M Na2CO3→OD410

Table S4-2 Bgl enzyme activity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Blank | OD410 | U/mL | Uaverage/mL | SD |
| 0.139 | 0.645 | 1652.588 | 1670.147 | 18.93862 |
| 0.142 | 0.652 | 1667.639 |
| 0.142 | 0.658 | 1690.215 |

**Egl**

Table S4-3 Glucose standard curve

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Glucose content(mg) | 0.000  | 0.010  | 0.020  | 0.030  | 0.040  | 0.050  | 0.060  | 0.070  | 0.080  |
| OD540 | 0.109  | 0.131  | 0.316  | 0.519  | 0.725  | 0.906  | 1.142  | 1.323  | 1.544  |

**Y=20.21X-0.0837 R2=0.999**

**Measured method:**

50μL crude enzyme + 50μL PBS +100μL 1%CMC-Na substance→50℃,30min→300μLDNS→100℃,5min→OD540

Table S4-4 Egl enzyme activity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Blank | OD540 | U/mL | Uaverage/mL | SD |
| 0.112 | 0.754 | 0.132845 | 0.130343 | 0.002318 |
| 0.115 | 0.732 | 0.128268 |
| 0.113 | 0.739 | 0.129916 |